

What is Claimed Is

1. A bicycle wheel comprising:

- a tire engaging portion located at the outward perimeter of the wheel;
- an inner portion located radially inward from said tire engaging portion;
- a first air engaging side surface extending radially between said inner portion and said tire engaging portion forming a first side of the wheel; and
- a second air engaging side surface extending radially between said inner portion and said tire engaging portion forming a second side of the wheel which is axially opposed to said first side of the wheel;

wherein said first and second air engaging side surfaces contain a plurality of surface features designed to create a turbulent boundary layer when the wheel travels through air to reduce aerodynamic drag.

2. The bicycle wheel of claim 1, wherein said inner portion is a hub.

3. The bicycle wheel of claim 2, wherein said hub is a separately fabricated from said first and second air engaging side surfaces, and said hub is connected at the center of said first and second air engaging side surfaces.

4. The bicycle wheel of claim 1, wherein said first and second air engaging portions each include a washer shaped brake engaging portion adjacent to said tire engaging portion.

5. The bicycle wheel of claim 4, wherein said brake engaging portion and said tire engaging portion are separately fabricated from said first and second air engaging side surfaces, and said brake engaging portion and said tire engaging portion are connected at the outward perimeter of said first and second air engaging side surfaces.
6. The bicycle wheel of claim 1, wherein said inner portion contains a plurality of surface features.
7. The bicycle wheel of claim 1, wherein said plurality of surface features are multi-sided polygonally shaped depressions.
8. The bicycle wheel of claim 7, wherein said multi-sided polygonally shaped surface features are of multiple diameters.
9. The bicycle wheel of claim 8, wherein the diameters of said multi-sided polygonally shaped surface features range from 0.2 – 0.4 inches.
10. The bicycle wheel of claim 7, wherein said multi-sided polygonally shaped surface features are arranged in a first pattern in a first zone, and a second pattern in a second zone radially outward from said first zone.

11. The bicycle wheel of claim 10, wherein the density of surface features in the second zone is greater than the density of surface features in the first zone.
12. The bicycle wheel of claim 10, wherein the number of surface features in a washer shaped section of a fixed width in the first zone is less than the number of surface features in a washer shaped section of the same fixed width in the second zone
13. The bicycle wheel of claim 1, wherein said plurality of surface features are radially extending surface features.
14. The bicycle wheel of claim 13, wherein said radially extending surface features are zig-zag shaped.
15. The bicycle wheel of claim 13, wherein said radially extending surface features have multiple shapes and multiple radial extents.
16. The bicycle wheel of claim 1, wherein said surface features are protrusions from said air engaging side surfaces.
17. The bicycle wheel of claim 1, wherein the wheel is disc shaped.
18. The bicycle wheel of claim 1, further comprising a valve stem receiving aperture.

19. The bicycle wheel of claim 1, wherein said plurality of surface features are designed such that when said wheel moves through a body of air, the boundary layer separates from said first and second air engaging side surfaces closer to the trailing edge of the wheel than the boundary layer would separate from a wheel without surface features.

20. The bicycle wheel of claim 1, wherein said plurality of surface features are circular shaped depressions.

21. A bicycle wheel comprising:

- a hub located at the center of the wheel;

- a tire engaging portion located at the outward perimeter of the wheel;

- a first air engaging side surface extending radially between said hub and said tire engaging portion forming a first side of the wheel having a brake engaging portion adjacent to the tire engaging portion; and

- a second air engaging side surface extending radially between said hub and said tire engaging portion forming a second side of the wheel which is axially opposed to said first side of the wheel having a brake engaging portion adjacent to the tire engaging portion;

- wherein said first and second air engaging side surfaces contain a plurality of surface features designed such that when said wheel moves through a body of air, the boundary layer separates from said first and second air engaging side surfaces closer to the trailing edge of the wheel than the boundary layer would separate from a wheel without surface features